

# **INTERNATIONAL SECURITY**

## **Summary of Issues**

**Atoms for Peace After 50 Years**

Lawrence Livermore National  
Laboratory, CGSR, April 2003

William Schneider, Jr., Chairman

# **I. HOW DID WE GET HERE AND WHAT DID WE LEARN**

- **Eisenhower's vision:**
  - **Defense policy focused on deterrence (“massive retaliation,: “new look”)**
  - **Overestimated the importance of civil use of atomic energy in the 20<sup>th</sup> century.**
  - **Realistic about the prospects for proliferation, but thought it could be managed and enforced.**

# **FUTURE OF NUCLEAR WEAPONS -- NWS**

- **Appeal of nuclear weapons is enduring**
- **US role for nuclear weapons has contracted – further contraction with ACW**
- **Unique effects-based characteristics rather than area destruction required**
- **More complex political role: reassurance, dissuasion, deterrence, and retaliation.**
- **Higher order of integration of nuclear and ACW than in the Cold War.**

# **FUTURE OF NUCLEAR WEAPONS -- NNWS**

- **Cost of defeating ACW is a stimulus to nuclear weapons acquisition.**
- **Loss of links of to superpowers has contributed to regional proliferation.**
- **Future proliferation may be driven by 2<sup>nd</sup> tier NW states export needs (DPRK, Pakistan, Iran).**
- **Too soon to assess impact of pre-emption and missile defense on proliferation.**

## **II. WHERE ARE WE HEADED IN DETERRENCE AND DEFENSE?**

- The range of 21<sup>st</sup> century requirements are more diverse, but stockpile size required is reduced.**
- Deterrence through retaliation is supplemented with other alternatives; missile defense, pre-emption, ACW.**
- Linking of systems-of-systems via IT parallel to transformation of ACW may produce “holistic” approach to NW.**

# **FUTURE TURNING POINTS**

- **Successful nuclear use.**
- **Widespread nuclear proliferation via networked suppliers (3<sup>rd</sup> tier proliferation).**
- **Effective use of BW/CW.**
- **Use by a State without an adversarial relationship to the US**

# **PRE-EMPTION**

- **Added tool to strengthen deterrence.**
- **Predominately ACW, not nuclear apart from a few specialized scenarios.**
- **Requires a high order of global C4ISR integration for implementation.**
- **Adaptive behavior by proliferators not identified.**

# **MISSILE DEFENSE**

- **Near/medium term impact of missile defense likely to be low.**
- **Effective missile defense could have significant consequences.**
- **Adaptive tactics of mixed BM/CM force makes missile defense more complex.**
- **Effective missile defense could affect the nuclear decision of marginal proliferators.**



# NW MODERNIZATION

- **Utility of current stockpile is limited; too focused on area effects.**
- **Understanding of low yield weapon effects is poor – complicates addressing new target sets.**
- **More research needed on the role of the unique characteristics of NW vs. ACW to address new target sets.**

# **III. WHERE ARE WE HEADED IN NON-PROLIFERATION?**

- **Is the threat of proliferation too great to develop civil nuclear power?**
- **Could the risks be mitigated by:**
  - **New proliferation-resistant designs?**
  - **Better practices with LW reactors to secure spent fuel?**
  - **Limiting or banning reprocessing?**
  - **Fuel leasing or ownership arrangements?**
  - **Other measures?**

# **NON-PROLIFERATION STRATEGY**

- **Is the universal approach of the NPT a viable basis for NP strategy?**
- **Problems created by individual states or (with or w/o links to terrorism) call for individual solutions.**
- **NP is an important but not dominant US foreign policy objective, hence inconsistent implementation history.**

# **NEW TOOLS FOR NP**

- **More effective inspections**
- **Tailored security assurances beyond a universal regime**
- **Modernized global or regional security architecture**
- **International missile defense**

# **IRAQ LESSONS LEARNED**

- **Campaign in Iraq may provide useful data on the nature of proliferation and new approaches to the problem.**
- **US statement to DPRK and Iran to “notice” the lessons of Iraq.**
- **Will proliferation become universally proscribed behavior?**